

**REMARKS**

Reconsideration and allowance of the subject application is respectfully requested in view of the foregoing amendments and remarks.

Claims 3-5 remain pending in the application. Claims 8-14 have been added in this amendment. Claims 1-2, 6-7 have been cancelled in this amendment without prejudice.

Claims 3, 5 have been amended and Claims 8-14 have been added to place the claimed invention in a better form for readability and resubmitted for reconsideration. The specification has also been modified and placed in a better form for readability. Typographical and grammatical errors have been corrected in the specification.

Claim 1 and 5 was rejected under §35 U.S.C. §102 (e) as being anticipated by Sung (US 6,587,231). Claim 1 has been canceled without prejudice. Claims 8-10 are independent claims and are patentable over Sung for the reason discussed below. Claim 5 has been amended to be dependent on claim 8.

The Examiner rejected claims 2, 6-7 under § 35 U.S.C. §103 (a) as being unpatentable over Sung (US 6, 587,231) in view of Wang et al (US 6,489,602). Claims 2, 6-7 have been canceled.

The present invention is directed to an image scanning device, which comprises a lower housing and an upper housing. The lower housing has a document plate positioned at the top side of the lower housing so a user can place a document facing up thereon. The upper housing is positioned above the lower housing and comprises a scanning module for transforming an optical image to digitalized image signals and a driving module for driving the scanning module to conduct the scanning. The scanning module comprises a reflective document light source for generating a light that does not pass through the lower housing to a reflective document; an image generating device for transforming the optical image of the document to digitalized image signals; and a lens, placed between the reflective document light source and the image generating device, for focusing the optical image onto said image generating device.

Wang, on the other hand, is directed to an image scanner having a driving mechanism to synchronize the movement of a transmission-mode light source and a carriage mounted therein an image pickup device is disclosed. The driving mechanism includes a driving motor and two transmission devices both connected to the driving motor. One of the transmission devices connects

the carriage to the motor. The other transmission device penetrates through the scanning platform at an upper end where an upper cover and a lower housing of the scanner housing are pivotally connected to connect the transmission-mode light source to the motor. Thereby, the two transmission devices are simultaneously driven by the motor to move the carriage and the transmission-mode light source synchronously.

Applicant submits that the reference does not show all the limitations of the present invention as required by new claim 8. Wang does not show a reflective document light source (i.e. 3211 of Fig. 3B) for generating a light that is not pass through said lower housing (i.e. 312 of Fig. 3B) to a reflective document (i.e. 33 of Fig. 3B) as required by new claim 8. New claim 8 recites in part, "a reflective document light source for generating a light that is not pass through said lower housing to a reflective document ;..."

In fact, Wang teaches that a series of arranged mirrors to reflect the light from the reflection-mode light provider to the document, as shown in FIG. 5A. The dashed lines indicate the light trace for a transmission-mode scanning operation, from the reflection-mode light provider 321, which is a lamp mounted in the carriage 322, through the transmission-mode light provider 311, which consists of mirrors M, to the document 10, and further to the image pickup device 323. Of course, owing to the synchronous movement of the transmission-mode light provider 311 and the carriage 322 according to the present invention, the transmission-mode light provider 311 can receive the light from the reflection-mode light provider 321 precisely. Alternatively, it is feasible that the transmission-mode light provider 311 is a lamp and the reflection-mode light provider 321 includes a set of mirrors M as shown in Fig. 5B of Wang. Likewise, for a reflection-mode scanning operation, the dashed lines indicate the light trace from the transmission mode light provider 311, which is a lamp, through the reflection-mode light provider 321, which consists of mirrors M, to the document 10, and further to the image pickup device 323. In other word, the dash lines that indicate the light trace pass through the upper housing 31 and the lower housing 32.

In view of the above Wang does not teach or disclose that a reflective document light source (i.e. 3211 of Fig.3B) for generating a light that does not pass through said lower housing (i.e.312 of Fig. 3B) to a reflective document (i.e. 33 of Fig. 3B) as required by new claim 8. Therefore, the new claim 8 is patentable over Sung in view of Wang et al. Claims 3-5 are

dependent on claim 8 and are patentable for the reasons discussed above with respect to claim 8 as well as on their own merits. Accordingly, the rejection should be withdrawn.

With respect to claim 9, the present invention is directed to an image scanning device comprising a lower housing and an upper housing. The lower housing has a document plate positioned at the top side of the lower housing so a user can place a document facing up thereon; a transparent document light source for projecting a light in a nearly straight line to a transparent document without passing through any mirrors; and a light source driving module for moving the transparent document light source to conduct the scanning. The upper housing positioned above the lower housing comprises a scanning module for transforming an optical image to digitalized image signals and a driving module for driving the scanning module synchronously with the light source driving module to conduct the scanning. The scanning module comprises an image generating device for transforming the optical image of the document to digitalized image signals; and a lens for focusing the optical image onto the image generating device.

Wang, on the other hand, is directed to an image scanner having a driving mechanism to synchronize the movement of a transmission-mode light source and a carriage mounted therein. An image pickup device is disclosed. The driving mechanism includes a driving motor and two transmission devices both connected to the driving motor. One of the transmission devices connects the carriage to the motor. The other transmission device penetrates through the scanning platform at an upper end where an upper cover and a lower housing of the scanner housing are pivotally connected to connect the transmission-mode light source to the motor. Thereby, the two transmission devices are simultaneously driven by the motor to move the carriage and the transmission-mode light source synchronously.

Applicant submits that the reference does not show all the limitations of the present invention as required by the added claim 9. The reference does not show a transparent document light source (i.e. 314 of Fig. 3C) for projecting a light in a nearly straight line (i.e. the light path from 314 to 3213 of Fig. 3C) to a transparent document (i.e. 33 of Fig. 3C) without passing through any mirrors; as required by the added claim 9. New claim 9 recite in part, "a transparent document light source for projecting a light in a nearly straight line to a transparent document without passing through any mirrors;..."

In fact, Wang teaches that a series of arranged mirrors to reflect the light from the reflection-mode light provider to the document, as shown in Fig. 5A. The dashed lines indicate

the light trace for a transmission-mode scanning operation, from the reflection-mode light provider 321, which is a lamp mounted in the carriage 322, through the transmission mode light provider 311, which consists of mirrors M, to the document 10, and further to the image pickup device 323. Of course, owing to the synchronous movement of the transmission-mode light provider 311 and the carriage 322 according to the present invention, the transmission-mode light provider 311 can receive the light from the reflection-mode light provider 321 precisely. Alternatively, it is feasible that the transmission-mode light provider 311 is a lamp and the reflection-mode light provider 321 includes a set of mirrors M, as shown in Fig.5B. Likewise, for a reflection-mode scanning operation, the dash lines indicate the light trace from the transmission-mode light provider 311, which is a lamp, through the reflection-mode light provider 321, which consists of mirrors M, to the document 10, and further to the image pickup device 323. In other words the dashed lines that indicate the light trace from the light provider (311 or 321) to the document 10 through the set of mirrors M.

In view of the above, Wang does not teach or disclose that a transparent document light source (i.e. 314 of Fig. 3C) for projecting a light in a nearly straight line (i.e. the light path from 314 to 3213 of Fig. 3C) to a transparent document (i.e. 33 of Fig. 3C) without passing through any mirrors as required by the added claim 9. Therefore, the newly added claim 9 is patentable over Sung in view of Wang et al. Dependent claims 11-12 are patentable for the reasons discussed with respect to claim 9 as well as on their own merits.

With respect to claim 10, the present invention is directed to an image scanning device comprise a lower housing and an upper housing. The lower housing has a document plate positioned at the top side of the lower housing for a user can place a document facing up thereon; a light source for producing a light: a light plate positioned below the document plate for distributing the light equally to the document. The upper housing positioned above said lower housing comprises a scanning module for transforming an optical image to digitalized image signals and a driving module for driving the scanning module to conduct the scanning. The scanning module comprises an image generating device for transforming the optical image of the document to digitalized image signals and a lens for focusing the optical image onto the image generating device.

Wang on the other hand, is directed to an image scanner having a driving mechanism to synchronize the movement of a transmission-mode light source and a carriage mounted therein

an image pickup device is disclosed. The driving mechanism includes a driving motor and two transmission devices both connected to the driving motor. One of the transmission devices connects the carriage to the motor. The other transmission device penetrates through the scanning platform at an upper end where an upper cover and a lower housing of the scanner housing are pivotally connected to connect the transmission-mode light source to the motor. Thereby, the two transmission devices are simultaneously driven by the motor to move the carriage and the transmission-mode light source synchronously.

Applicant submits that the reference does not show all the limitations of the present invention as required by new claim 10. The reference does not show a light plate (i.e. 316 of Fig. 3D) positioned below the document (i.e. 33 of Fig. 3D) plate for distributing the light equally to the document as required by the added claim 10. The added claim 10 recites in part, “a light plate positioned below the document plate for distributing the light equally to the document;...”

In fact, Wang teaches that the term “transmission-mode light provider” indicates a device for providing a light signal for the document to be scanned to perform transmission-mode scanning operation. Generally, the light provider is a lamp. When scanning, the lamp is energized to emit light. The light penetrates the document and reaches the image pickup device to be sensed, thereby realizing image data of the document. In other words, he does not refer to use a light plate to distribute the light equally to the document.

In view of the above, Wang does not teach or disclose that a light plate (i.e. 316 of Fig. 3D) positioned below the document (i.e. of Fig. 3D) plate for distributing the light equally to the document as required by the added claim 10. Therefore, the newly added claim 10 is patentable over Sung in view of Wang et al. Applicant respectfully submits that independent claim 10 along with the dependent claims 13-14 are patentable over the applied art, and are not disclosed or taught or suggested by the cited arts. Accordingly, withdrawal of the rejections of the pending claims is respectfully requested. Favorable consideration and prompt allowance are earnestly solicited and appreciated.

The drawings stand objected to for including reference numbers 111, 331 and 3141 which were not mentioned in the specification. Submitted concurrently herewith is a proposed drawing change to Figs. 3B, 3C and 3D in which reference number 331 has been changed to 311. The specification has been amended to include references no. 111 and 3141. No new matter has been added. In view of these amendments and drawing changes these objections should be withdrawn.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

**LOWE HAUPTMAN GILMAN & BERNER, LLP**



Kenneth M. Berner  
Registration No. 37,093

Customer Number: 22429  
1700 Diagonal Road, Suite 300  
Alexandria, Virginia 22314  
(703) 684-1111  
(703) 518-5499 Facsimile  
Date: February 9, 2004  
KMB/jd



APPARATUS FOR SCANNING DOCUMENT  
Application No. 09/716,232  
Inventor: TSAI, JENN-TSAIR  
*Annotated Sheet Showing Changes*

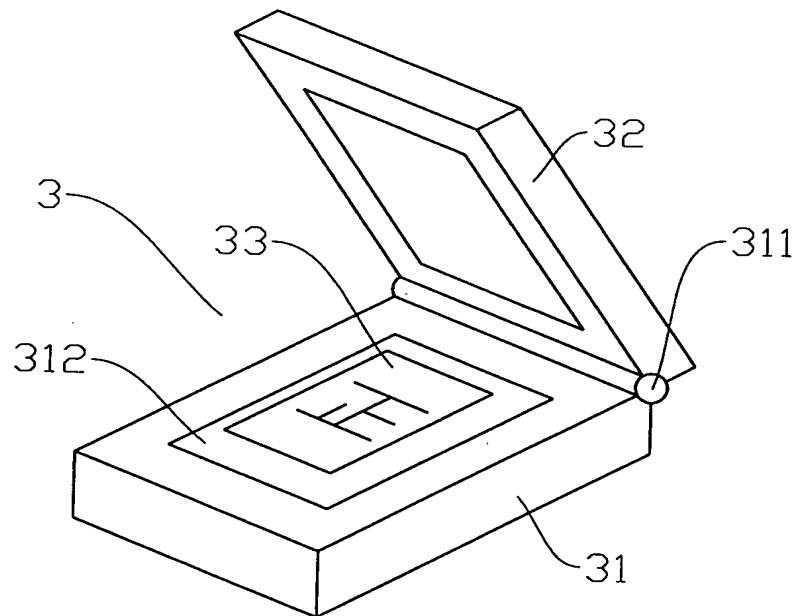


Fig. 3A

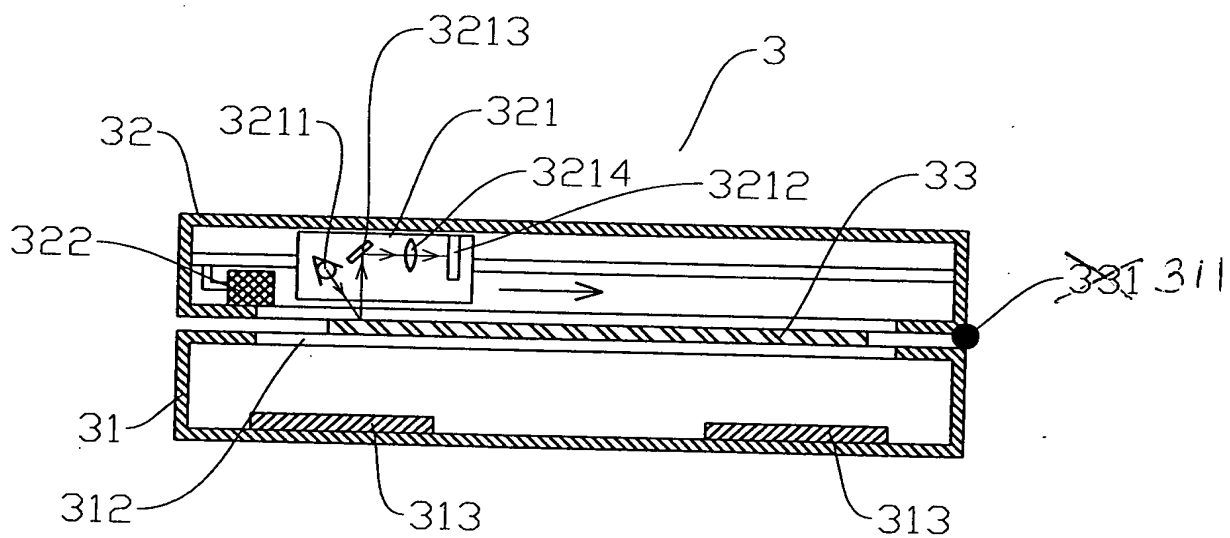


Fig. 3B

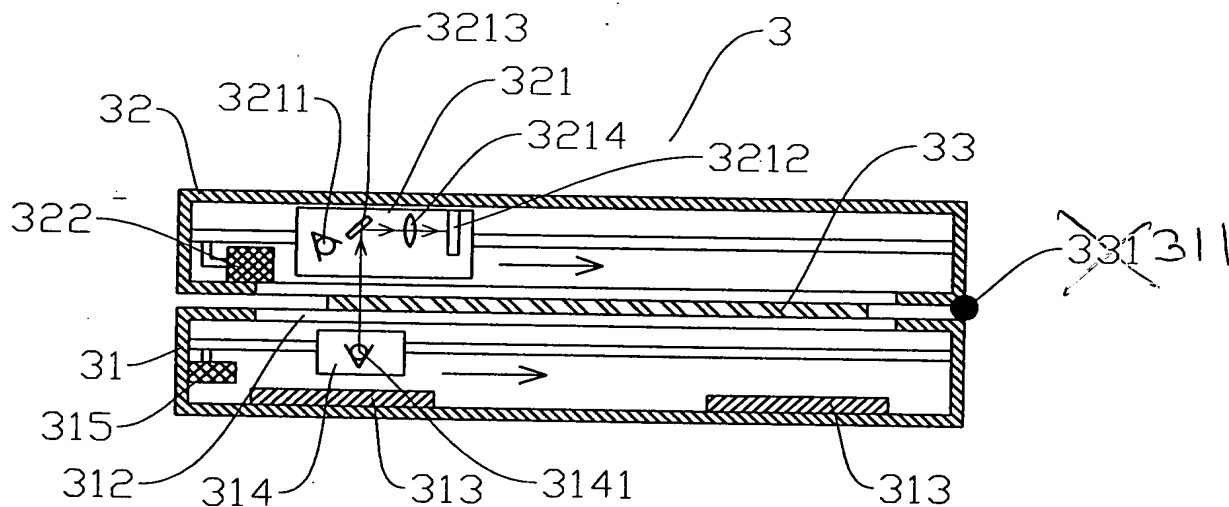
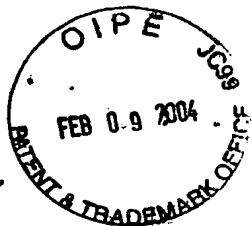


Fig. 3C

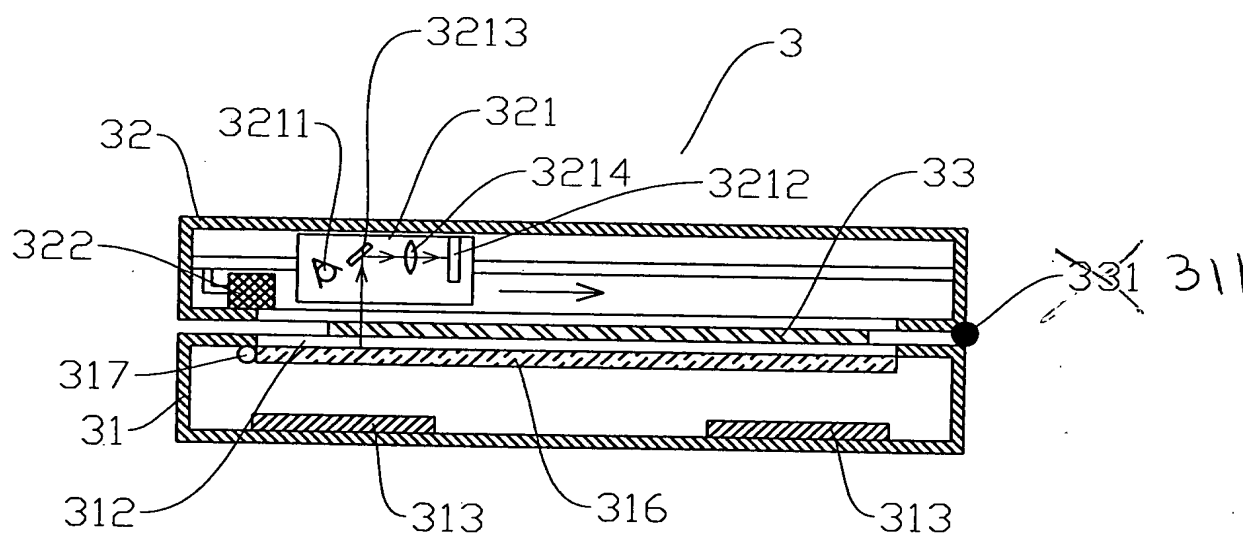


Fig. 3D